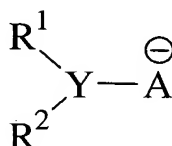


## Amendments to the Claims:

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

1. (currently amended) A composition of matter comprising a [[A]] ligand having the formula:



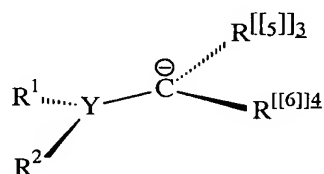
where

A is CH<sub>2</sub>, CHR<sup>3</sup>, CR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>, O, S, or PR<sup>3</sup>;

R<sup>1</sup> and R<sup>2</sup> are independently hydrogen, aryl, C<sub>6-15</sub> diarylphospho, C<sub>1-18</sub> alkylthio, C<sub>6-15</sub> arylthio, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> alkoxy, C<sub>6-14</sub> aryloxy, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino; R<sup>3</sup> and R<sup>4</sup> are independently hydrogen, C<sub>1-8</sub> alkyl, C<sub>6-10</sub> aryl; and

Y is B, Al, or Ga.

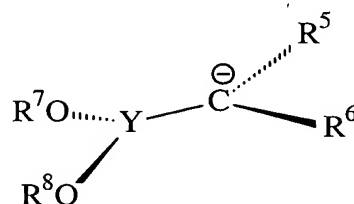
2. (currently amended) The ~~ligand~~ composition of claim 1 wherein said ligand has ~~having~~ the formula:



where

~~R<sup>5</sup> and R<sup>6</sup> are independently hydrogen, C<sub>1-8</sub> alkyl, C<sub>6-10</sub> aryl, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> alkoxy, C<sub>6-14</sub> aryloxy, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino.~~

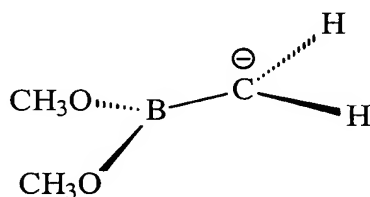
3. (currently amended) The ~~ligand~~ composition of claim 1 wherein said ligand has having the formula:



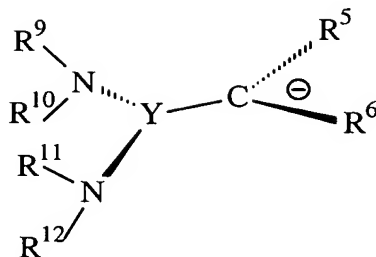
where

R<sup>7</sup> and R<sup>8</sup> are independently C<sub>1-8</sub> alkyl, C<sub>6-10</sub> aryl, or C<sub>7-15</sub> aralkyl.

4. (currently amended) The ~~ligand~~ composition of claim 3 wherein said ligand has having the formula:



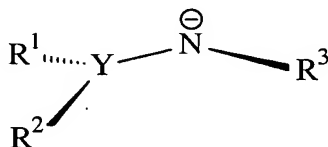
5. (cancelled)
6. (currently amended) The composition ~~ligand~~ of claim 2 wherein said ligand has having the formula:



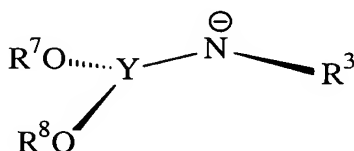
where

$R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$  are independently  $C_{1-8}$  alkyl,  $C_{6-10}$  aryl, or  $C_{7-15}$  aralkyl.

7. (currently amended) The ~~ligand~~ composition of claim 1 wherein said ligand has having the formula:



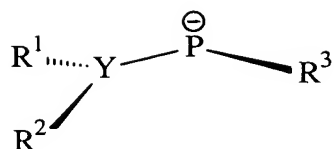
8. (currently amended) The ~~ligand~~ composition of claim 7 wherein said ligand has having the formula:



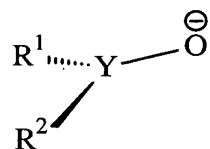
where

$R^7$  and  $R^8$  are independently  $C_{1-8}$  alkyl,  $C_{6-10}$  aryl, or  $C_{7-15}$  aralkyl.

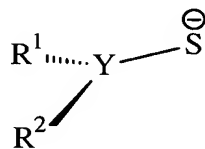
9. (currently amended) The composition ~~ligand~~ of claim 1 ~~having~~ wherein said ligand has the formula:



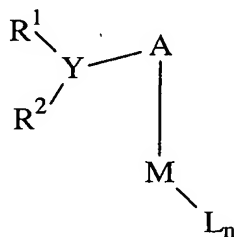
10. (currently amended) The ~~ligand~~ composition of claim 1 wherein said ligand has ~~having~~ the formula:



11. (currently amended) The ~~ligand~~ composition of claim 1 ~~having~~ wherein said ligand has the formula:



12. (currently amended) A polymerization catalyst ~~containing~~ comprising a compound ~~ligand of claim 1,~~ and having the formula:



where

M is a transition metal;

L is a sigma bonded or pi bonded ligand;

n is an integer such that the valency of M is satisfied;

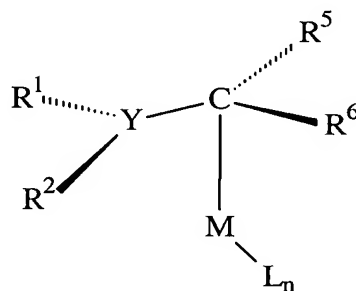
A is CH<sub>2</sub>, CHR<sup>3</sup>, CR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>, O, S, and PR<sup>3</sup>;

R<sup>1</sup> and R<sup>2</sup> are independently hydrogen, aryl, C<sub>6-15</sub> diarylphospho, C<sub>1-18</sub> alkylthio, C<sub>6-15</sub> arylthio, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> alkoxy, C<sub>6-14</sub> aryloxy, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino;

R<sup>3</sup> and R<sup>4</sup> are independently hydrogen, C<sub>1-8</sub> alkyl, C<sub>6-10</sub> aryl, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> alkoxy, C<sub>6-14</sub> aryloxy, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino; and

Y is B, Al, or Ga.

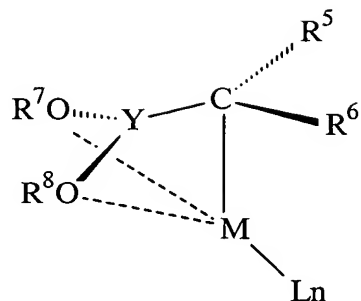
13. (currently amended) The polymerization catalyst of claim 12 wherein  
said compound has ~~having~~ the formula:



where:

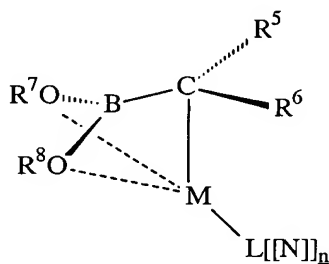
R<sup>5</sup> and R<sup>6</sup> are independently hydrogen, a C<sub>1-8</sub> alkyl group, C<sub>6-10</sub> aryl group, C<sub>7-15</sub> aralkyl group, C<sub>1-10</sub> alkoxy group, C<sub>6-14</sub> aryloxy group, C<sub>1-10</sub> dialkylamino group, or C<sub>6-15</sub> diarylamino group.

14. (currently amended) The polymerization catalyst of claim 12 wherein  
said compound has ~~having~~ the formula:

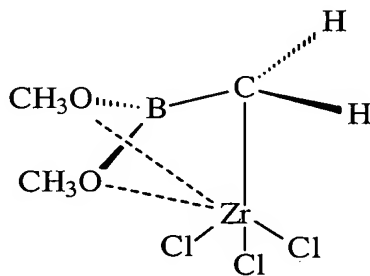


where R<sup>7</sup> and R<sup>8</sup> is hydrogen, a C<sub>1-8</sub> alkyl group, C<sub>6-10</sub> aryl group, or C<sub>7-15</sub> aralkyl group.

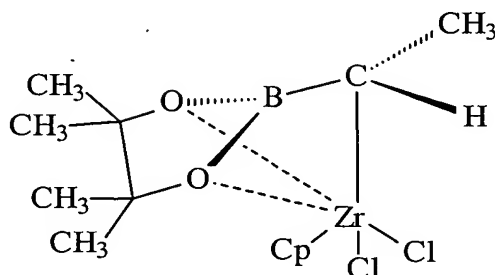
15. (currently amended) The catalyst of claim 12 wherein said compound  
has having the formula:



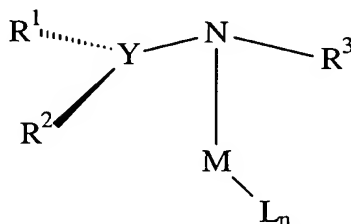
16. (currently amended) The catalyst of claim 12 wherein said compound  
has having the formula:



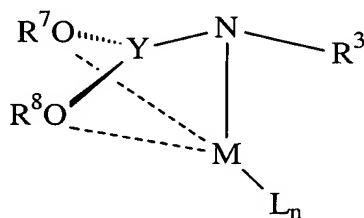
17. (currently amended) ~~The~~ A catalyst comprising a compound of claim 12 having the structure:



18. (currently amended) The catalyst of claim 12 ~~having~~ wherein said compound has the formula:



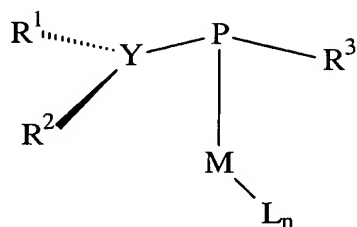
19. (currently amended) The catalyst of claim 12 ~~having~~ wherein said compound has the formula:



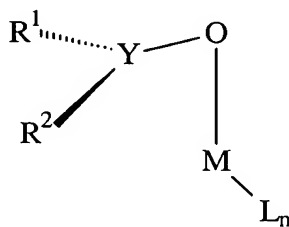
where

$R^7$  and  $R^8$  are independently a  $C_{1-8}$  alkyl group,  $C_{6-10}$  aryl group, or  $C_{7-15}$  aralkyl group.

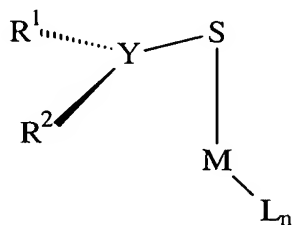
20. (currently amended) The catalyst of claim 12 ~~having~~ wherein said compound has the formula:



21. (currently amended) The catalyst of claim 12 ~~having~~ wherein said compound has the formula:



22. (currently amended) The catalyst of claim 12 ~~having~~ wherein said compound has the formula:



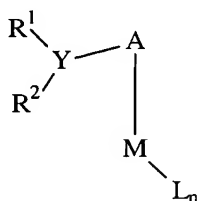
23. (original) A process for the oligomerization or polymerization of at least one  $\alpha$ -olefin, said process comprising polymerizing said at least one  $\alpha$ -olefin in the



presence of a polymerization catalyst component comprising the polymerization catalyst of claim 12.

24. (original) A polyolefin or oligoolefin prepared by the process of claim 23.

25. (new) A polymerization catalyst containing a ligand of claim 1, and having the formula:



where

M is a transition metal;

L is a sigma bonded or pi bonded ligand;

n is an integer such that the valency of M is satisfied;

A is CH<sub>2</sub>, CHR<sup>3</sup>, CR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>, O, S, and PR<sup>3</sup>;

R<sup>1</sup> and R<sup>2</sup> are independently hydrogen, aryl, C<sub>6-15</sub> diarylphospho, C<sub>1-18</sub> alkylthio, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino; wherein R<sup>1</sup> and R<sup>2</sup> may be bonded to form a cyclic structure;

R<sup>3</sup> and R<sup>4</sup> are independently hydrogen, C<sub>1-8</sub> alkyl, C<sub>6-10</sub> aryl, C<sub>7-15</sub> aralkyl, C<sub>1-10</sub> alkoxy, C<sub>6-14</sub> aryloxy, C<sub>1-10</sub> dialkylamino, or C<sub>6-15</sub> diarylamino; and

Y is B, Al, or Ga.